

14 Feb 1990

MU2CX-D
MULTIMETER, DIGITAL

1. GENERAL. This procurement requires a portable, hand-held multimeter.

2. CLASSIFICATION. Type II, Class 3, Style E, and Color R in accordance with MIL-T-28800. The handle requirement is not invoked.

3. OPERATIONAL REQUIREMENTS. The equipment shall be provided with autoranging capabilities and a memory function which captures and holds a reading for display. The equipment shall be capable of measurements within the minimum ranges and specifications detailed below.

3.1 DC voltage. Range: 5 mV to 1 kV. Accuracy: $\pm(0.5\%$ of reading + 1 count). Input resistance: 10 megohms minimum.

3.2 AC voltage. Range: 100 mV to 750V. Accuracy: $\pm(2\%$ of reading + 5 counts). Frequency range: 45 Hz to 500 Hz up to 5V, 45 Hz to 1 kHz from 5V to 750V. Input RC: 10 megohms or greater shunted by 100 pF or less. The meter shall be average responding and RMS indicating.

3.3 DC current. Range: 10 mA to 10A. Accuracy: $\pm(2\%$ of reading + 3 counts).

3.4 AC current. Range: 10 mA to 10A. Accuracy: $\pm(3\%$ of reading + 2 counts). Frequency range: 45 Hz to 1 kHz.

3.5 Resistance. Range: 0.1 ohms to 20 megohms. Accuracy: $\pm(2\%$ of reading + 1 count).

3.6 Overload protection. DC volts function: 500 Vdc or ac on lowest range, 1,000 Vdc or 750 Vac on all other ranges. AC volts function: 1,000 Vdc or 750 Vrms. Current functions: 200% of full scale value on mA ranges, 15A on 10A range. Resistance: 500 Vdc or ac.

3.7 Display. A 3-1/2 digit display that is readable at "arms length" shall be provided. A bar graph or analog indicator shall be provided for peak and null interpretation.

4. GENERAL REQUIREMENTS.

4.1 Power source. MIL-T-28800 dc internal power source requirements are invoked. The batteries shall be of a commercially available type and provide 12 months of operation before replacement. The nominal power source requirements are not invoked.

4.2 Weight. 0.45 kg (1.0 lb) maximum.

4.3 Dimensions. 178 mm (7 in) high, 80 mm (3.15 in) wide, and 45 mm (1.8 in) deep, nominal.

4.4 Lithium batteries. Per MIL-T-28800, lithium batteries are prohibited without prior authorization. A request for approval for the use of lithium batteries, including those encapsulated in integrated circuits, shall be submitted to the procuring activity at the time of submission of proposals. Approval shall apply only to the specific model proposed.

4.5 Accessories. The equipment shall be provided with safety-designed test leads in accordance with MIL-T-28800. A protective case or holster that allows storage of test leads shall be provided.